Title (en)

SENSORLESS DRIVE DEVICE, CONTROL METHOD AND PROGRAM FOR BRUSHLESS DC MOTOR

Title (de)

SENSORLOSE ANTRIEBSVORRICHTUNG, STEUERUNGSVERFAHREN UND PROGRAMM FÜR EINEN BÜRSTENLOSEN GLEICHSTROMMOTOR

Title (fr)

DISPOSITIF D'ENTRAÎNEMENT SANS CAPTEUR, PROCÉDÉ DE RÉGULATION ET PROGRAMME POUR MOTEUR À COURANT CONTINU SANS BALAI

Publication

EP 2940856 A1 20151104 (EN)

Application

EP 13867804 A 20131210

Priority

- JP 2012288946 A 20121228
- JP 2013083059 W 20131210

Abstract (en)

The purpose of the present invention is to reduce noise by controlling vibration due to rotation fluctuation, and to consume only current required for maintaining the rotation by bringing the current for driving a motor closer to a state of synchronization. A drive means drives a sensorless brushless DC motor by switching an energization pattern at a constant frequency to determine the rotation position of the rotor of the sensorless brushless DC motor. A detection means detects a zero-cross signal representing the switching of the phase of the rotor. A calculation means calculates a synchronization determination rate representing a percentage of the number of detected zero-cross signals. A pulse width control means controls the pulse width of a PWM drive duty in the drive means so that the calculated synchronization determination rate falls within a target range.

IPC 8 full level

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